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(54) **METHOD FOR MAKING A POROUS SILICA AEROGEL COMPOSITE MEMBRANE**

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(57) **ABSTRACT**

The present invention provides a method for making a porous silica aerogel composite membrane. The porous silicon oxide aerogel composite membrane includes a porous aluminum oxide membrane having a plurality of macro pores with an average diameter larger than 50 nm and a porous silica aerogel membrane formed on at least one side of the porous aluminum oxide membrane and the macro pores of surface layers of the porous aluminum oxide membrane where the porous silica aerogel membrane has a plurality of meso pores with an average diameter of 2~50 nm and is derived from methyltrimethoxysilane precursor by a sol-gel synthetic method.

7 Claims, 6 Drawing Sheets

